ACC.11
60th Annual Scientific Session & Expo

E750
JACC April 5, 2011
Volume 57, Issue 14

IMAGING AND DIAGNOSTIC TESTING

CARDIOVASCULAR RISK STRATIFICATION IN DIABETIC PATIENTS FOLLOWING SINGLE PHOTON EMISSION COMPUTED TOMOGRAPHY MYOCARDIAL PERFUSION IMAGING: DOES EXERCISE LEVEL MAKE A DIFFERENCE?

ACC Poster Contributions
Ernest N. Morial Convention Center, Hall F
Sunday, April 03, 2011, 3:30 p.m.-4:45 p.m.

Session Title: Radionuclide Imaging: Risk Stratification
Abstract Category: 39. Nuclear Cardiology/PET
Session-Poster Board Number: 1063-234

Authors: *Santosh Padala, Abhijit Ghatak, Vivian Teixeira, Mahajabeen Rashid, Deborah Katten, Alan Ahlberg, Gary V. Heller, Hartford Hospital, Hartford, CT, University of Connecticut School of Medicine, Farmington, CT*

Background: Previous studies have demonstrated that diabetic patients have significantly higher cardiac events when compared to their non-diabetic counterparts .Whether the exercise level achieved during testing impacts outcomes in these patients has not been studied

Methods: We retrospectively analyzed 16,327 consecutive patients undergoing exercise and vasodilator stress SPECT MPI from 1995-2005. Diabetic and non-diabetic patients were categorized into 3 groups: METs ≥5, METs <5 and pharmacologic stress groups. All studies were interpreted using 17-segment ASNC model .The end point was a composite of nonfatal myocardial infarction and cardiac death. Maximum follow up period was 6 years with a mean of 2.4 ± 1.6 years. Annualized event rates (AER) for the composite end points were calculated using SPSS 17

Results: Diabetics who can achieve METs ≥5 had equal or less number of cardiac events when compared to the non-diabetics who cannot achieve METs ≥5. All patients undergoing pharmacologic stress had significantly higher events, with diabetic patients in the highest risk categories [Figure 1]

Conclusion: Diabetic patients achieving METs ≥5 during exercise SPECT myocardial perfusion imaging have the same low cardiac event rate as their non-diabetic counterparts. All pharmacologic stress outcomes were worse than exercise especially in diabetic patients. These findings suggest that exercise is an important intervention for a diabetic patient to reduce the overall risk of subsequent cardiac events

	SSS <4 [Normal]			SSS 4-8 [Mild Perfusion abnormality]			SSS >8 [Moderate to Severe Perfusion abnormality]		
	Non DM AER%	DM AER%	P value	Non DM AER%	DM AER%	P value	Non DM AER%	DM AER%	P value
METs ≥ 5	0.4	1	<0.001	1.5	2.0	0.42 (NS)	2.3	2.8	0.47 (NS)
METs < 5	1.1	1.7	0.51 (NS)	2.0	2.6	0.60 (NS)	4.5	5.3	0.52 (NS)
Pharmacologic stress	1.6	3.1	0.001	3.9	4.8	0.27 (NS)	6.5	10.1	0.001
P value	0.001	0.001		0.001	0.005		0.001	0.001	